

PATENT ABSTRACTS OF JAPAN

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(21)Application number : 02-044447 (71)Applicant : MITSUBISHI HEAVY IND LTD

(22)Date of filing : 27.02.1990 (72)Inventor : KINOMOTO TOSHIAKI
YOSHIDA YASUYUKI

(54) METHOD FOR SPECIFYING LEAKING PART

(57)Abstract:

PURPOSE: To confirm the presence or absence of leaking material by making sodium nitrite in mixture leaked from the leaking part of a heat medium react with p,p'-diaminodiphenyl methanesulfonic hydrochloride, and detecting the presence of generated blue coloring matter.

CONSTITUTION: A small amount of heat medium leaks through a pin hole or a crack which is formed at the welded part of the pipe and the pipe plate and the like in a heat exchanger. With the nitrite in this heat medium, 1% aqueous solution of hydrochloric acid of 1% p,p'-diaminodiphenyl methanesulfonic hydrochloride is made to react. Thus blue coloring matter is generated, and the leaking part can be specified simply. At this time, the reagent is synthesized by sulfonating 4,4'-diaminodiphenyl methane with fuming sulfuric acid, adding barium chloride and removing sulfuric acid radical, eventually synthesized as an aqueous solution of hydrochloric acid. The nitrous-acid detecting sensitivity of the 1% aqueous solution of hydrochloric acid of the 1% p,p'-diaminodiphenyl methanesulfonic hydrochloride is very high, and the presence of nitrous acid can be sufficiently confirmed even with $0.3\mu\text{g-NO}_2^-$.

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